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Maryland Department of Transportation

Beverley K. Swaim-Staley, Secretary  
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May 19, 2010

**MEMORANDUM**

**TO:** Mr. Kirk McClelland  
Director, Office of Highway Development

**FROM:** Dennis German  
Chief, Community Design Division 

**PROJECT:** MD 24 (Rocks Road) Slope Repair Project Priority Sections

**RE:** Advisory Committee Meeting Minutes

The second Advisory Committee Meeting for the MD 24 project was held on April 7, 2010 at the McFaul Activities Center, Room 4, 525 West MacPhail Road, Bel Air, Maryland. The following people were in attendance:

Mr. Greg Golden	Maryland Department of Natural Resources (DNR) – Environmental Review Unit
Mr. Daryl Anthony	DNR – Maryland Park Service
Mr. Chris Bushman	DNR – Maryland Park Service
Mr. David Malkowski	Maryland State Highway Administration (SHA) – District 4
Ms. Fran Ward	SHA – District 4
Mr. Terry Maxwell	SHA – Office of Environmental Design
Mr. Richard Wilke	SHA – Office of Environmental Design
Mr. Cornelius Barmer	SHA – Office of Highway Development
Mr. Dennis German	SHA – Office of Highway Development
Mr. Kirk McClelland	SHA – Office of Highway Development
Ms. Jialin Tian	SHA – Office of Highway Development
Ms. Jessica Silwick	SHA – Office of Planning and Preliminary Engineering
Mr. Chad Shrodes	Harford County Council Member
Ms. Ellen Slagle	Maryland State Legislature - District 35A office aide
Mr. Steve Hurt	McCormick & Taylor, Inc -Maryland Department of the Environment (MDE) – Nontidal Wetlands and Waterways Division
Ms. Marsha Kaiser	Parson Brinckerhoff
Mr. Eric Cook	Rocks Area Resident

My telephone number/toll-free number is \_\_\_\_\_  
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Mr. Jack Dettmer	Rocks Area Resident
Mr. Greg Durham	Rocks Area Resident
Mr. Todd Holden	Rocks Area Resident
Mr. Robert Taylor	Rocks Area Resident
Mr. Ben Lloyd	Rocks Area Advisory Committee
Mr. David Jones	Rocks Area Advisory Committee
Ms. Deborah Bowers	Rocks Area Advisory Committee– Save the Rocks
Ms. Debbie Coomes	Rocks Area Advisory Committee – Save the Rocks
Mr. Brian Goodman	Rocks Area Resident – Save the Rocks
Ms. Rebecca Nelson	State Delegate Nominee Candidate
Mr. Rod Bourn	The Ma and Pa Heritage Trail, Inc.
Mr. Joseph DaVia	US Army Corps of Engineers
Mr. Jack Dinne	US Army Corps of Engineers
Mr. Mitch Keiler	US Fish and Wildlife

The purpose of this meeting was to share different perspectives from stakeholders, to provide an overview of federal and state agencies' regulatory background, environmental review and project decision-making process, to learn about SHA's stream evaluation methodology and to explore the pros and cons of various slope repair techniques. Mr. Dave Malkowski made the opening remarks by introducing elected officials and welcoming everyone who attended this meeting.

Mr. Joseph DaVia of the US Army Corps of Engineers (USACE) began with his presentation detailing the history and statutory authority and responsibilities of the USACE under various Acts. USACE-Baltimore District administers the regulatory program under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for the State of Maryland, the Susquehanna River Basin within the Commonwealth of Pennsylvania, and the District of Columbia. The Corps reviews two types of permits: General Permits (GP) for activities/projects causing only minimal impacts; and Standard Individual Permits (SIP) for projects with potentially substantial environmental impacts. The threshold for substantial impacts is generally considered to be one (1) acre. Clean Water Act Section 404 regulates the discharge of dredged or fill material into all waters of the US, including jurisdictional wetlands. USACE only authorizes the practicable alternative that is least damaging to the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences.

As described by Mr. DaVia, alternative analysis is the centerpiece of Section 404 permit review process. This review and evaluation sequence is in the order of avoiding, minimizing, and mitigating. A range of practicable alternatives must be analyzed, including both on-site and off-site options. The degree of "practicable" is a sliding scale depending upon the applicants' capability and the overall project purpose. Project cost is also a factor to take into account; however, a more expensive alternative could still be considered a practicable alternative.

Mr. Steve Hurt of McCormick & Taylor Inc., a consultant representing the MDE-Nontidal Wetlands and Waterways Division, followed with a presentation regarding MDE's review responsibilities. The waterway regulations are designed to ensure that activities in a waterway or its floodplain do not create flooding on upstream or downstream property, maintain aquatic

flora, fauna, and habitat, and protect waterways from erosion. If the impacts are unavoidable, applicants are required to demonstrate the necessity of the proposed impact and the public need of the proposed work. Along with a nontidal wetlands and waterway authorization, a State Water Quality Certification (WQC) is to protect public health or welfare, enhance quality of water, protect aquatic resources, and serve the purposes of the federal Acts such as the Section 404 permit. Similar to USACE, the review process requires avoidance, minimization, and mitigation for loss of habitat. MDE is a lead permit agency, but relies heavily on input from commenting agencies such as the US Fish & Wildlife Service and MD Department of Natural Resources. MDE's permit role for this project is to avoid and minimize impacts to the Deer Creek waterway, if feasible. The previous design alternatives proposed by the Maryland State Highway Administration (SHA) have varying degrees of disturbance to the creek. Shifting the alignment could be considered avoiding/minimizing impacts to the waterway.

Mr. Greg Golden from DNR's Environmental Review Unit stated that all of Maryland's natural resources, including the park land, Deer Creek (a state-designated scenic wild river), and forest will be assessed during the review process, as well as cultural and historic resources. DNR will participate in every detail of the project. As a landlord, DNR will protect public interest and respect public comments, Mr. Daryl Anthony added.

A presentation regarding Maryland Tree Laws, given by Mr. Richard Wilke SHA- Landscape Architecture Division, covered Maryland Roadside Tree Law and Maryland Reforestation Law (5-103). Maryland Roadside Tree Law oversees tree and forest clearing within a public roadway right-of-way of impacts totaling less than one acre. The mitigation requirement is determined by Maryland DNR-Forest Service based upon the impact and typically amounts to a 1 to 1 replacement ratio. It is preferred to replace cleared trees in kind on-site. If on-site space is limited, off-site tree replacement is also a common option. The Maryland Reforestation Law (5-103) governs linear highway projects which clear one acre or more of forest. The mitigation requirement depends upon the mitigation options and requirements of DNR-Forest Service. This project will be conducted in compliance with whichever law applies, based on the impact.

After a five minute break, Ms. Marsha Kaiser from Parsons Brinckerhoff shared the field walk video with the Committee members. This video demonstrated a field trip by Councilman Chad Shrodes, area residents, and Ms. Kaiser on Saturday, March 27, 2010. The group walked through the MD 24 corridor from north end of Section A to the south end of Section G. At the field walk, Ms. Deborah Bowers and Ms. Debbie Coomes shared many background stories of this area and old documentary pictures and files with the group.

Ms. Jessica Silwick from SHA – Environmental Planning Division then provided a presentation to discuss the National Environmental Policy Act (NEPA), the Maryland Environmental Policy Act (MEPA), and Section 106 of the National Historic Preservation Act (NHPA). NEPA requires federal agencies to integrate environmental values, such as environmental impacts, transportation needs and public input, into their decision making processes. The level of NEPA analysis is determined based upon the project impact area. If the project impacts a publicly owned park and recreation area, publicly owned wildlife and waterfowl refuge, or historic sites, a Section 4(f) review will be invoked. Section 4(f) protections will only allow use of the resource if the impact is *de minimis* or there are not any

feasible and prudent alternatives that avoid the resource. Similar to NEPA, MEPA is a state level environmental assessment document which requires state agencies to take environmental factors into consideration during the decision making process. MEPA will be applied on all Maryland State funded projects. SHA is looking to fund Section A with State funds and Section G with Federal funds, as a result of the state budget restriction. The coordination and environmental assessment process is similar for either NEPA or MEPA.

Considering the potential disturbance of surrounding cultural and historical resources, Section 106 processes will also be included as the project moves forward. Section 106 requires federal agencies to take into account the effects of the undertaking on “significant historic properties” that are included in, or eligible for, the National Register of Historic Places. Properties of significance are determined by their relevance to a historic event or person, any significant design/construction attributes, their degree of preservation and other potential information related to American history.

Additionally all nine federally recognized Native American tribes were notified about the project in 2008. One email response from the Oneida tribe indicated no knowledge of Oneida connections to the project area.

Consistent with the environmental regulations noted above, the MD 24 project development process has included extensive coordination efforts with multiple agencies. Numerous meetings have been held with federal, state and local level environmental agencies to discuss and evaluate the project design alternatives and their associated impacts.

The final presentation of the evening was given by Mr. Cornelius Barmer, of the SHA Highway Hydraulic Division. This presentation detailed SHA’s stream classification methodology, highway drainage needs and challenges, water quality concerns, and general stream stabilization techniques. Based on engineering classification for riverine systems, Deer Creek is classified as Type F-4 stream within the project limits. The Type F streams may be defined as a deeply incised channel on low gradients. These types of streams experience develop very high lateral erosion rates. Also, they are typically undergoing widening processes driven by higher flood flows that want to reach a broad floodplain. Generally, a stream naturally changes and adjusts its shape and pattern in response to the speed, volume and duration of flow over long time periods. While a stream meanders, the inside of the bend will show evidence of deposition where there is more friction and slower flowing water; however, the outside of bend will erode where fast flowing water with lots of energy is directed to the outer bank. Both erosion spots in Section A and Section G are following the meander pattern. The existing conditions of Deer Creek were found to be incised, degraded, and laterally unstable. The effects of past channel manipulation from damming, roadway infrastructure, and et cetera have contributed to past stream degradation and is likely to contribute to ongoing degradation.

As a result of the lack of drainage facilities along the roadway, water ponding along the edges of travel lanes may become a safety hazard after rain or snow events. The typical roadside drainage system has two types: closed system and open system. The closed system, containing inlets and pipes, usually fits better in a compact area. The open system with ditches could have a more natural appearance and provides a recognized water quality benefit.



Mr. Barmer discussed the Deer Creek Watershed Restoration Action Strategy and its relation to the projects (WRAS). He stated the WRAS lists various objectives. Specifically, one objective describes the need to reduce the impact of existing development on water quality and natural resources. Also, he stated that these projects would meet the objectives and through partnering we could improve water quality within the watershed by including stormwater treatment measures in these projects.

There are various types of slope stabilization techniques. For any project related stream work, SHA would give special attention to work site control, selection of experienced contractors, assurance of work quality, and post-construction monitoring. SHA has investigated the following seven techniques in depth which could be practicable for this project;

A rock riprap slope is one of the most common and least expensive options for stream bank stabilization. Loose irregular rock randomly placed along the stream bank to prevent further erosion. Vegetation may be able to be planted among the riprap to soften its engineered look. The maximum support slope is 2:1 (a rise of 1 foot for each 2 feet of horizontal distance). Examples of this approach may be found along Deer Creek near Harmony Church Road and approximately 0.5 miles west of MD 136.

Gabions are wire mesh boxes filled with stone or other materials. With landscaping veneers, gabions could provide a natural appearance. It is a good candidate to replace the need for larger individual stones. However, wire mesh could corrode and fail over time, especially in the saturation condition which would allow the inside materials to spill and release. This method is not recommended for use near the river.

An imbricated stone wall is a stack of selectively placed regular quarry stones which would be placed along the slope to stabilize the stream bank. The slope could be near vertical, although offsets are preferred. In order to install footer stones, a trench will need to be cut along the toe of the bank. Therefore, temporary stream diversion would be required during the installation. Imbricated stone has a modest potential to enhance stream habitat since the void spaces between the rocks lying below the waterline provide cover areas for fish. Modest vertical offsets are required. Examples of this method are in evidence throughout this stream section.

Concrete/modular block wall systems are also a common option used to prevent slope erosion. By using form liner or veneers, the wall face can simulate stone or rock formations. While the wall is vertical, placing the footings requires extensive excavation and grading. This technique requires the largest disturbed area, but may have a longer lifespan.

A High Performance Turf Matting System uses geotextile blanket covering on soil and percussion anchors with an applied landscape veneer. This method was used along the shore line, and is not typically used in riverine applications. The maximum support slope is 2:1. Because of the anchor placement, the disturbance area could be extensive.

Log cribbing/root wad revetment utilizes harvested trees and logs trenched into the slope. This technique requires the harvesting of large, mature timbers from a local source. This option is used in the West Coast where nearby forest areas are being logged. The area of disturbance is similar to Turf Matting applications.

Floodplain Adjustments restore stable channel conditions with provisions for the modern watershed development. The temporary impact to riparian buffers could be significant. With tree or vegetation planting in the riparian buffer area, this technique has the most natural look and best water quality benefit, but also requires the greatest degree of impact during construction.

In summary, these projects have two main challenges. Management of roadway surface stormwater drainage is distinct from the slope stability concerns, but they are related. Strategies to address the stormwater and drainage challenges are generally targeted on the opposite side of the road from slope stability challenges. Both challenges are planned to be addressed as a part of these projects.

An evaluation chart, listing all of the techniques mentioned above, was handed to the attendees. This chart was developed per the list of Project Objectives developed at the previous meeting in February. Committee members are encouraged to consider which of these techniques might be applied on Deer Creek. Some techniques could be used in combination. Mr. David Jones recommended adding another column in the evaluation chart for “future maintenance”.

Mr. Greg Golden stated that no matter which option(s) was selected, the short-term appearance, especially immediately upon construction completion, might be less than desirable since the landscaping veneer is still becoming established. In two or three years after all plants grow and adjust to the area, the natural beauty will return. The significance of this area is not only the natural resources, but also the cultural and historic resources that we need to consider, Mr. Terry Maxwell added.

At the next meeting, the Committee members will work as groups to begin to develop potential solutions to the 2 main project purposes – roadway surface drainage control and stream bank stabilization. The stabilization technique matrix is intended to aid members in this effort, but clearly each technique has its pros and cons. Our objective is to develop an option that enjoys a consensus of all Committee members and their respective stakeholders.

An area resident, Mr. Eric Cook, suggested that the Advisory Committee should post the correct project information and meeting progress to the public to clear the rumors. The Advisory Committee proactively addresses the potential safety hazard of protecting the roadway and slope from future degradation. Mr. Kirk McClelland said SHA has been and will continue to post all project and Committee related documents, including agendas, presentations, and meeting minutes on SHA’s project website <http://www.roads.maryland.gov/WebProjectLifeCycle/countyProjects.asp?county=12> Councilman Chad Shrodes said he would post the meeting related information on Harford County’s website. Mr. Daryl Anthony will check if the meeting minutes could be placed in Rocks State Park office to share with the park users.

The next meeting will be scheduled for early May.

The above comments reflect my understanding of the topics, discussions, and decisions reached at this meeting. If you have any questions, comments, or corrections regarding this meeting or these minutes, please contact Mr. Dennis L. German, Chief, Community Design Division, SHA at 410-545-8900, toll free 888-228-5003, or via email at [dgerman@sha.state.md.us](mailto:dgerman@sha.state.md.us) within fourteen (14) days of this date.

cc: Attendees